UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.   : 6,823,234 B2
DATED   : November 23, 2004
INVENTOR(S)   : Toshiaki Otsuki et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1,
Line 40, transfer the portion that follows to Column 2, line 12, after "the interpolation points.", and insert the same in column 8, between lines 15 and 16:

$$f(t)_x = A_x t^3 + B_x t^2 + C_x t + D_x$$
$$f(t)_y = A_y t^3 + B_y t^2 + C_y t + D_y$$
$$f(t)_z = A_z t^3 + B_z t^2 + C_z t + D_z$$

Thus obtained curve Ce is shown in FIG. 20.

Then, interpolation is performed on the defined curve Ce with a unit not greater than a set unit in preparing the sequence of command points (Step S16).

In the foregoing embodiment, at the start of the procedure, all of the command points P0, P1, P2, ... , Pn-1, Pn are read at Step S1. Alternatively, only the necessary command points may be read and the procedure may be carried out on the read points; so that the approximate curve is successively created while reading the data of the command points to expedite the procedure.

In obtaining interpolation points, i.e. shape-defining points, respective two points are interpolated between adjacent twos of the command points in the foregoing embodiment, respective points more than two may be interpolated between adjacent twos of the command points. Further, in creating the approximate curve Cm, the shape-defining points not greater than two are selected before and after the shape-defining point Qi. The shape-defining points greater than two may be selected. Furthermore, one or more of the command points P0, P1, P2, ... , Pn-1, Pn may be used as the shape-defining points with the interpolation points Q1, Q2, ... , Q2n.

If a line segment connecting adjacent two of the command points P0, P1, P2, ... , Pn-1, Pn is shorter than a reference value, an interpolated point Pj' such as a middle point between such adjacent command points Pj, Pj+1 may be regarded as a substitute command point for the adjacent command points Pj, Pj+1 which are to be deleted. In this case, it is determined whether or not a distance between the adjacent command points Pi and Pi+1 is not greater than the predetermined at Step S2, and if the distance is not greater than the predetermined value, the above procedure is performed to define a substitute command point for obtaining the interpolation points.--
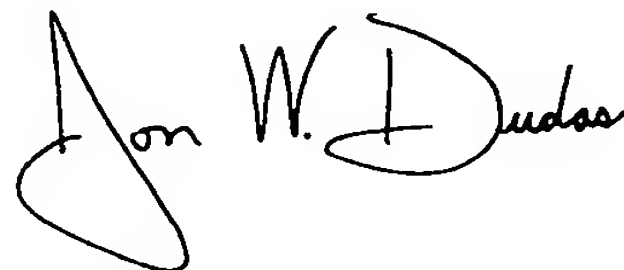
Column 3,
Line 3, change "describe" to -- described --

Column 5,
Line 65, change "a" (first occurence) to -- α --

Signed and Sealed this

Twenty-sixth Day of April, 2005

JON W. DUDAS
Director of the United States Patent and Trademark Office